



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,960	06/15/2001	Jean-Pierre Weber	027557-093	5975

7590 08/26/2004

Ronald L. Grudziecki  
BURNS, DOANE, SWECKER & MATHIS, L.L.P.  
P.O. Box 1404  
Alexandria, VA 22313-1404

EXAMINER
----------

LI, SHI K

ART UNIT	PAPER NUMBER
----------	--------------

2633

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/880,960

Applicant(s)

WEBER ET AL.

Examiner

Shi K. Li

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2633

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Koga et al. (U.S. Patent 5,617,234).

Koga et al. discloses a WDM wavelength monitoring circuit in FIG. 23. FIG. 23 comprises a phased array demultiplexer 12 with input ports and output ports, a phase control means 22, a detector means 16, a control means 21.

Regarding claim 2, Koga et al. controls the temperature of the demultiplexer.

Regarding claim 8, Koga et al. includes in FIG. 23 a thermistor 121 for generating a signal to the controller for compensation on the basis of the temperature of the phasar device.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koga et al. (U.S. Patent 5,617,234) in view of Podoleanu et al. (U.S. Patent 5,975,697).

Art Unit: 2633

Koga et al. has been discussed above in regarding to claims 1-2 and 8. The difference between Koga et al. and the claimed invention is the operation mechanism of the phase control means. Podoleanu et al. teaches in col. 11, lines 1-7 that electro-optical, acousto-optical or magneto-optical mechanism can be used to change phase. These mechanisms are equivalents. Where the claimed differences involve the substitution of interchangeable or replaceable equivalents and the reason for the selection of one equivalent for another was not to solve an existent problem, such substitution has been judicially determined to have been obvious. See *In re Ruff*, 118, USPQ 343 (CCPA 1958). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace thermo-optic phase control means with electro-optic phase control means, acousto-optic phase control means or magneto-optic phase control means, as taught by Podoleanu et al., in the WDM wavelength monitoring circuit of Koga et al. because they are equivalents.

5. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koga et al. (U.S. Patent 5,617,234) in view of Weber (PCT Application Pub. WO 99/12297).

Koga et al. has been discussed above in regarding to claims 1-2 and 8. Regarding claim 6, the difference between Koga et al. and the claimed invention is the operation mechanism of the phase control means. Weber lists in page 7, lines 9-16 a number of operation mechanisms and teaches in page 18, line 15-page 19, line 11 electro-optic effect and plasma effect for operation mechanism for a phase control means. These mechanisms are equivalent. Where the claimed differences involve the substitution of interchangeable or replaceable equivalents and the reason for the selection of one equivalent for another was not to solve an existent problem, such substitution has been judicially determined to have been obvious. See *In re Ruff*, 118,

USPQ 343 (CCPA 1958). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace thermo-optic phase control means with electro-optic phase control means or plasma phase control means, as taught by Weber, because they are equivalents.

Regarding claim 7, the difference between Koga et al. and the claimed invention is that Koga et al. does not teach to integrate the phasar device and other active devices and electronic circuits in a single integrated device. Weber teaches in page 8, lines 13-16 to integrated a phasar device with active elements and/or electronic circuits. One of ordinary skill in the art would have been motivated to combine the teaching of Weber with the WDM wavelength monitoring circuit of Koga et al. because integrating the phasar, active elements and electronic circuits together increases the reliability and lowers the manufacturing and assembly cost of the monitoring circuit. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate the phasar, active elements and electronic circuits together in a single integrated device, as taught by Weber, in the WDM wavelength monitoring circuit of Koga et al. because it increases the reliability and lowers the manufacturing and assembly cost of the monitoring circuit.

*Response to Arguments*

6. Applicant's arguments filed 17 June 2004 have been fully considered but they are not persuasive.

Applicant argues that Koga et al. merely discloses a temperature controller 21 and nothing in Koga et al. shows, teaches or suggests a control means which supplies a control signal such that respective signals from desired ones of the multiplex channels are output in turn from a

Art Unit: 2633

phaser device to a detector means as claimed in claim 1. Additionally, Applicant argues that Koga et al. merely discloses a cooler 22 for regulating the temperature of the AWG 12. These arguments are not persuasive. Koga et al. teaches to form a control loop comprising phase comparator to detect phase derivation of the phased array demultiplexer, and a temperature controller, with input from the phase comparator, to change the temperature via a Peltier cooler so as to adjust the phase of the phased array demultiplexer (e.g., see col. 6, line 57-col. 7, line 2). The temperature controller is equivalent to the control means and the Peltier cooler is equivalent to the phase control means of claim 1. The purpose of changing the temperature is to change the phase of the phased array demultiplexer. In fact, this is the same method used by the claimed invention as evidenced by the citation in page 15, lines 6-12, "the phase control is preferably achieved by controlling the temperature of sections of waveguide with a thin-film heater deposited on top of the wavelguides" and claimed in claim 2 of the instant application. Therefore, Koga et al. not only anticipates claim 1, but also anticipates claims 2 and 8.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 703 305-4341. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

skl

  
JASON CHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600